

Graduate students rally for more on-campus housing

Students propose amendment to MIT's Volpe zoning petition, demanding 1,800 grad housing units

Sharon Chao
STAFF REPORTER

The student and community affiliate group Graduate Student Apartments Now held a rally in front of 77 Massachusetts Avenue and marched to Cambridge City Hall for an Ordinance Committee hearing Oct. 12 to demand that MIT build new graduate housing units as a condition of the commercial redevelopment of MIT's recently purchased Volpe parcel in Kendall Square.

In 2013, 38 percent of graduate students were housed on campus. The administration stated in an email to all graduate students on Oct. 16 that it will apply for permits to construct 700 more beds on campus, in addition to the 250 net beds currently being built as part of the Kendall Square redevelopment, by the end of 2020. The total addition of these 950 new beds will house more than 50 percent of the current graduate student population.

In an official statement on its website, GSAN wrote, "We com-

mend the administration for having the boldness to allocate real resources towards addressing the housing needs." However, it also pointed out that the "950-bed commitment falls somewhat short of the projected 1,000-1,100 shortfall in graduate housing" as determined by the interim report that the Graduate Student Working Group conducted in October.

The movement for more graduate student housing

GSAN began as a group of graduate students in the Urban Studies and Planning Department who met informally in the spring to discuss the redevelopment of the Volpe site, for which the MIT Investment Management Company had won a \$750 million bid from the federal government.

GSAN organizer Kelly Blynn SM '17 said in an interview with *The Tech* that GSAN was formed "to meet existing unmet demand for graduate student housing and to ensure that MIT is a good neighbor to its surrounding communities."

According to MIT's 2016 Town Gown report, 62 percent of MIT graduate students live off-campus. The 2016 Boston Comprehensive Housing Market Analysis estimated that students in Boston and Cambridge occupy 25 percent of the available rental housing stock. The 2016 Greater Boston Housing Report Card reported that average market rents rose 59 percent between 2009 and 2016 in Boston's inner core cities, which includes Cambridge.

In May, the graduate students submitted 300 signatures to the Volpe working group in support of more graduate housing. GSAN organizer Douglas McPherson MA '18 said in an interview with *The Tech*, "We felt it was quite clear that the commercial development at the Volpe site was going to bring a significant influx of new workers to Cambridge, adding to the already competitive rental housing environment."

The students received no response from the Volpe working

Housing, Page 12



COLLYN CHAN

MIT graduate students rally in front of 77 Massachusetts Ave. Oct. 12, calling for 1,800 new graduate apartments on campus as a part of the Graduate Students Apartments Now movement.



JOHNNY BUI—THE TECH

Shovels engraved with "Kendall Square at MIT" were displayed with painted construction helmets before the groundbreaking of MIT's newest grad student dorm during the Kendall Square Innovation Playground at HUBweek Oct. 11. Despite this new dorm, grad students still feel there will not be enough on-campus housing for them.

REPORTER'S NOTEBOOK

Nightclub hosts tech startup showcase

Technology includes robotic marimba player and smart jewelry

By Meenakshi Sivapriya
STAFF REPORTER

Tech enthusiasts and nightclubs don't go well together. But that didn't stop GetGeeked from hosting its tech showcase at the Royale Nightclub in Boston on Oct. 13. Getting first-hand access to gadgets that haven't been released in the market yet and meeting fellow technology lovers, all while sipping on delicious cocktails, seemed like a perfect way to spend a Friday night.

Lenovo, the presenting sponsor, took center stage by providing demos of its Star Wars: Jedi Challenges experience on its newly developed Augmented Reality glasses, a stand-alone vision processing unit with a 40-degree field of view. Lenovo also gave away two Star Wars edition Yoga 910 2-in-1 convertible laptops as part of the raffle.

Another favourite of the energetic audience was Shimon the robotic marimba player. This four-armed musician listens to the human player, then collaborates and improvises on the music notes. It claims to play chords that are "humanly impossible" to hit. It uses artificial intelligence and creativity algorithms to capitalize on the combined strength of itself and its human counterpart.

Airfox, a software company from Boston, built upon the theme of decentralization which cryptocurrencies use and created Airtokens, blockchain tokens that can be redeemed for mobile data. The startup, which makes profits from advertising revenue, aims at making mobile internet more accessible to anyone who owns a smartphone.

Invisawear, a smart jewelry company; Wooboo, an educative toy for kids (slightly creepy if you were to look at it when you're half-awake in the middle of the night); and Nightingale, a smart home sleeping system, all added to the menagerie of "Smart" devices.

iRobot had also turned up at the event showcasing its Roomba vacuum cleaner. Though the presentation mentioned HackMIT 2017's runner-up PlotRoomba, iRobot demonstrated how to use Roomba for what it was actually built for — cleaning floors. Quite disappointing considering that I was first introduced to it through the cool hack of tracing out graphs of functions.

In a nutshell, for all the geeks out there who love a Friday night with free food and booze along with a chance to get their hands dirty with new and upcoming technology, events like GetGeeked are the ones to look forward to.

LIGO -Virgo collaboration observes gravitational waves from colliding neutron stars

Event provides evidence for how heavy elements form

By Emma Bingham
EXECUTIVE EDITOR

Scientists announced Monday the first detection of gravitational waves from the collision of two neutron stars. Light from the collision was simultaneously observed by telescopes all around the world.

The LIGO-Virgo collaboration observed the signal on Aug. 17. LIGO, whose two interferometric observatories are located in Washington and Louisiana, has made four previous observations of gravitational waves from the collision of black holes.

This particular observation is special because it was a neutron star collision rather than a black hole collision, and it was observed not only by LIGO in the U.S. but also by Virgo in Europe.

Not only is this collision the first event detected by both gravitational-wave and optical astronomy, but it has provided a wealth of observations that will contribute to insights in many different fields of physics.

Detecting a neutron star collision

The gravitational-wave signal lasted 100 seconds, and its characteristics indicated that it likely originated from the collision of a pair of neutron stars with a combined mass of around 2.7 times that of the sun's mass.

Neutron stars are small, dense stars that form when stars ten or twenty times the size of the sun reach the end of their lives and collapse in on themselves. They are the densest stars in the universe — if the stars they formed from had been any more massive,

they would have collapsed further to become black holes.

Scientists simultaneously observed a short gamma ray burst located in roughly the same area of the sky as the gravitational-wave signal.

Over the days following the first gravitational wave and gamma ray observations, more than 70 telescopes observed the afterglow of the collision in X-ray, ultraviolet, optical, infrared, and radio wavelengths.

The explosion produced when two neutron stars collide is called a kilonova. Scientists have long thought that such events are the source of many of the elements heavier than iron in the universe.

Stars, during their normal lifetimes, fuse light elements to re-

LIGO, Page 2

IN SHORT

Flu shots will be available Oct. 24 between 8 a.m. and 6 p.m. in Walker Memorial.

A Starr Forum lecture entitled *Syria: Which Way Forward?*,

with speakers Robert Ford and Steven Simon, will take place today from 4:30–6:00 p.m. in 3-270.

Red Line trains will be running between Kendall/MIT and Park Street this weekend for the Head of the Charles Regatta. However,

buses will replace the service most other weekends until Dec. 17.

Good luck on your remaining half-term final exams!

Send news and tips to news@tech.mit.edu.

CAREFUL CHAOS

East meets west in a gamelan concert at the ICA. **ARTS, p. 8**

RESPONSE TO SOCIOECONOMIC SURVEY

New resources created for students facing financial hardship. **OPINION, p. 4**



SHABU-SHABU

Hot pot: are we doing this right? **ARTS, p. 7**

PLEASE VOTE NOV. 7!

Alum encourages students to vote in Cambridge elections. **OPINION, p. 4**

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WEATHER

Warmth continues in the Northeast

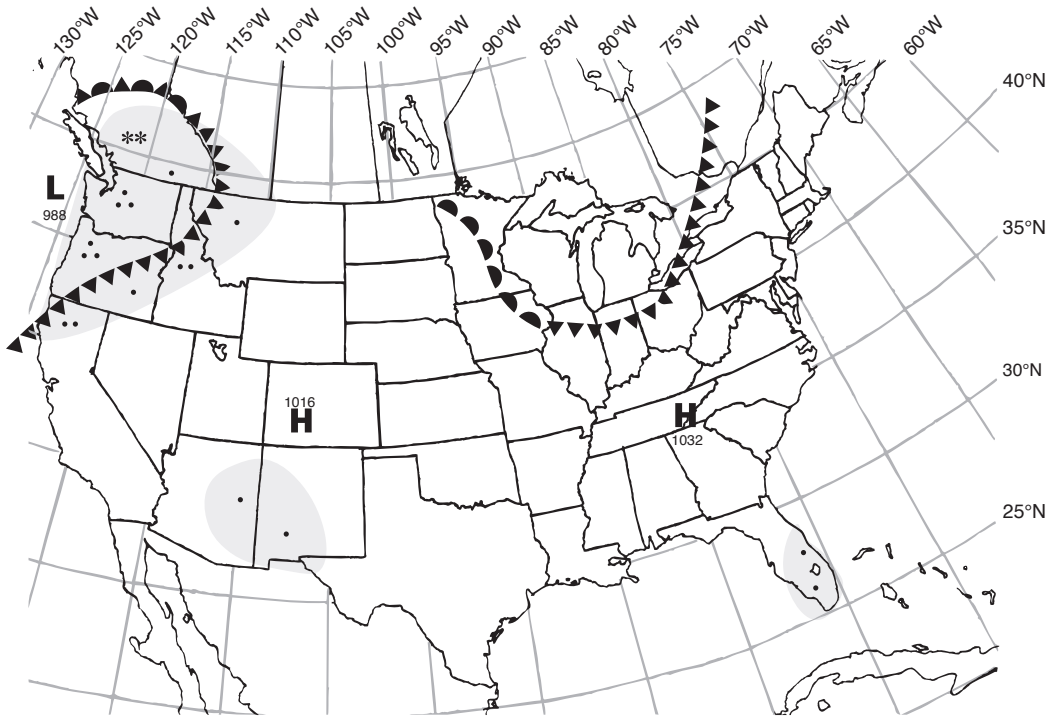
By Jordan Benjamin

After a brief cooldown earlier this week, temperatures warmed yesterday and today under high pressure and sunny skies to the mid 70s. Tomorrow should be the coolest day of this warm period, as the high temperature should stall in the upper 60s. Over the weekend, temperatures will return again to the mid 70s, with lows in the 50s and clear skies as another high pressure system slides by the region. Enjoy your out-

door activities in this beautiful weather - it's a special treat for so late in the year! Towards the middle of next week, a cold front will sweep across the East Coast likely ushering in the coolest air of the season. This would end a remarkable stretch of warm weather; this October is likely to finish as one of the warmest ever for Boston. The average last 70°F day in Boston is around November 1st. Thus, the recent 70°F temperatures are not extremely anomalous; however, their longevity has been very surprising.

Extended Forecast

Today: Sunny. High around 73°F (23°C). Winds SW at 10-20 mph.
Tonight: Clear. Low around 55°F (13°C). Winds SW at around 10 mph.
Tomorrow: Sunny. High around 70°F (21°C). Low around 50°F (10°C).
Saturday: Sunny. High around 74°F (23°C). Low around 53°F (12°C).
Sunday: Sunny. High around 73°F (23°C).



Situation for Noon Eastern Time, Thursday, October 19, 2017

Weather Systems	Weather Fronts	Precipitation Symbols	Other Symbols
H High Pressure	--- Trough	Snow * Rain ∇	☁ Fog
L Low Pressure	— Warm Front	Showers ∇	⚡ Thunderstorm
☄ Hurricane	▲ Cold Front	Light *	∞ Haze
	▲ Stationary Front	Moderate **	
		Heavy ***	

Compiled by MIT Meteorology Staff and The Tech

Do you have
a question
for
President
Reif?

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Virgo helps detect stars' location

LIGO, from Page 1

lease energy. They do not usually fuse anything heavier than iron because these processes require more energy than they release. A large supply of neutrons makes fusion of heavier elements possible, which is why kilonova are thought to be a source of elements such as gold and platinum. In the optical observations of the neutron star merger, scientists detected spectra characteristic of these elements, providing support for this theory.


The Virgo gravitational wave observatory
The addition of the Virgo detector allowed scientists to pinpoint the location of the gravitational wave signal much more accurately than in previous LIGO detections. The neutron star collision was pinpointed to an 28-degree area of the sky with a probability of 90%. The Virgo detector, which is located near Pisa, Italy, started its first observing run this summer after being upgraded to Advanced Virgo.

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Solution to Flu Season
from page 8

1	2	3	8	4	7	5	6	9
7	8	9	5	1	4	2	3	6
2	3	4	9	5	8	6	7	1
8	9	1	6	2	5	3	4	7
9	1	2	7	3	6	4	5	8
6	7	8	4	9	3	1	2	5
4	5	6	2	7	1	8	9	3
3	4	5	1	6	9	7	8	2
5	6	7	3	8	2	9	1	4

Solution to Specter
from page 9

9	6	8	2	5	7	4	3	1
3	7	5	9	1	4	6	8	2
2	4	1	3	6	8	7	9	5
4	3	6	5	2	1	9	7	8
5	8	2	6	7	9	1	4	3
1	9	7	8	4	3	5	2	6
8	5	3	7	9	6	2	1	4
7	2	4	1	3	5	8	6	9
6	1	9	4	8	2	3	5	7

Solution to Streaming
from page 9

MAMA	SISSY	ROBS
EPIC	ATONE	OREO
GUSTAVE	FLAUBERT	
CINEMA	NEIGH	
BAH	TAS	PGA
ALIBIS	PROB	ANT
DIEU	FRILLS	
FLOZIE	GFELD	
BUENOS	OWES	
POT	TRAP	MOBILE
ICU	LOL	BOG
ATRIA	PUTRID	
GOES	WITH	THE
EPEE	SMITE	SERA
TINE	MILER	ODES

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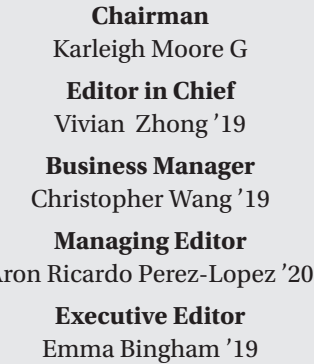
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OPINION

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THEATER REVIEW

Coping with trauma abroad

The world premiere of *A Guide for the Homesick* examines gay identity, betrayal, and acceptance in contemporary times



T. CHARLES ERICKSON

Samuel H. Levine and McKinley Belcher III in *A Guide for the Homesick*.

By Ethan Vo

In a seedy hotel room in Amsterdam, two strangers connect and struggle as they wrestle with their pasts. With this simple premise, Ken Urban crafts a story which explores betrayal by those dearest to us and the psychological trauma brought on by volunteering in foreign aid efforts. Central to these conflicts are the issues of grappling with sexuality and coming out in a contemporary age of purported acceptance. Urban, who is an MIT Senior Lecturer, drew inspiration from self-conducted interviews with Doctors Without Borders participants and the violence against LGBT people in Uganda. Support-

ed by high energy performances by its two actors, the result is a riveting drama which tackles these issues in a densely packed 75 minutes.

The two strangers are Teddy and Jeremy: Teddy is a charismatic businessman who invites Jeremy up to his room after conversing in the bar. Despite his intentions, he reveals early on that his friend has gone missing after an episode of manic depression and his own desire for company. On the other hand, Jeremy is a nervous Harvard graduate who recently finished a volunteer aid effort in Uganda. While it is tempting to draw comparisons with other neurotic gay Jewish characters in theatre such as *Angels in America*'s

Louis Ironson or William Finn's Marvin, Jeremy's main motivations stem from his trauma and guilt as a nurse. Despite their repeated unwillingness to admit the truth of their betrayals, Urban's dialogue continuously fleshes out these characters, creating powerful and sympathetic scenes as their stories unravel.

McKinley Belcher III (Teddy) and Samuel H. Levine (Jeremy) both give powerhouse performances in their respective roles, showing great versatility as memories suddenly enter the narrative. Even more impressive is their grasp on their characters when identities begin to blur as in *Angels in America*. As the niceties finish, Belcher provides a gripping physical-

A Guide for the Homesick

Written by Ken Urban

Directed by Colman Domingo

Oct. 6 – Nov. 4, 2017

Wimberly Theatre,
Calderwood Pavilion at
the Boston Center for the
Arts

ity which is matched by Levine as his own character navigates through self-loathing and mental breakdowns. There are some points in their beginning interactions which feel artificial, but the brokenness of their characters and their emotional depth make me question if it is an intentional decision.

The set design effectively communicates the themes of space and time in the play. The walls of the set convey the hotel room's intimate and cramped nature, evoking the symbolism of the room both as a temporary bubble from the outside world and as the closet for LGBT people. However, with shifts in lighting, the memories of past and present occupants invade the hotel room, transporting scenes across space and time. Despite the narrative complexities of the play, the lighting changes and dialogue shifts made these transitions in setting very clear.

As Urban notes in his research, the teachings of evangelical American pastors, even from Massachusetts, transformed the sentiment towards LGBT people in Uganda from indifference to the persecution they face there now. Witnessing this violence shatters the hopeful idealism that Jeremy's sheltered upbringing nurtured in him, while Teddy's interactions with his friend leading up to his disappearance haunt him equally. As their time in the hotel finally runs out, we, the audience, are left to ponder the question alluded to by the title: how do we go back home?

OPERA REVIEW

Boston Lyric Opera opens its season with a compelling Tosca

A touching production of Puccini's classic opera

Tosca

Presented by Boston Lyric Opera

Conducted by David Stern; Directed by Crystal Manich;
Music by Giacomo Puccini; Libretto by Luigi Illica and
Guiseppe Giacosa

Emerson Cutler Majestic Theatre

219 Tremont St

Playing through Oct. 22

By Alexandra Sourakov

STAFF WRITER

Tosca tells a tale of feminine strength and power in a masculine world. The Boston Lyric Opera (BLO) stages a traditional interpretation of Puccini's famous work, setting it in 18th century Rome, replete with vying political factions and a towering religious edifice. Our eponymous (meta) heroine, Floria Tosca (Elena Stikhina), is a passionate opera singer determined to save her lover, Cavalier Cavaradossi (Jonathan

Burton) from the clutches of Baron Scarpia (Daniel Sutin). We have the satisfaction of seeing the vain, jealous Tosca of Act I transform into the decisive and brave Tosca of Act III. She asserts herself despite all odds and, although we know it will not end well, we are cheering for her the entire way.

In order to accommodate the full orchestra that the opera required in the Cutler Majestic Theatre, the BLO made the ingenious decision to merge the orchestra with the set design by placing the musicians and conductor on a raised tier on stage. Veiled coyly by a shim, the audience can see the

conductor and can only catch tantalizing glimpses of the orchestra. This arrangement has the added effect of making it even more apparent how the action on stage and the plot are not the centerpiece, but are conduits for our appreciation and interpretation of the musical score. Because each character is paired with a distinct melody, a leitmotif, in Puccini's score, the orchestra and singers dance a synchronous duet.

Although this theatre is not the permanent home of the BLO, it was an excellent host — the acoustics were wonderful and the soaring notes sailed cleanly to all corners of the theatre. Elena Stikhina's voice, debuting in the U.S., was especially notable, with a piercing, heart-wrenching quality, at times coalescing with the instruments and at other times, vibrantly striking out on its own. When Floria Tosca is faced with the decision of giving up her body to the repulsive Scarpia or seeing her lover put to death, the agony of this moment is transmitted to us through a powerful (Mozart would have termed it "golden") silence which rises to a crescendo, finally to be broken Elena Stikhina's exquisite execution of the "Vissi d'arte" aria. I got chills, and it wasn't because I was cold.

Daniel Sutin played a solid Baron Scarpia but seemed a bit subdued compared to

the way Scarpia is often portrayed. There is not much that is sympathetic about Scarpia, as is the case with many villains in grand opera, so I feel that it is perfectly acceptable for the singer to embrace the vileness of the character in full. For Tosca's victory to be triumphant, she must face a worthy opponent. There is something in Scarpia to be pitied. He is jealous of the freedom and joie de vie that Tosca and Cavaradossi. Head of the secret police, Scarpia possesses significant political power, and yet, he cannot charm a woman. He sings that he prefers to take women by force ("For myself the violent conquest"), for that is what he enjoys, but perhaps this is simply a protective layer of self-delusion in a man who cannot get women any other way.

Baritone David Cushing was superb as Angelotti, and I only wish he could be allotted more stage time. Jonathan Burton, as Cavalier Cavaradossi, makes an equally great happy, playful lover and tortured prisoner. The final scene was understated and touching — not something one always encounters in grand tragedies. Tosca's shriek on discovering her lover's fate struck deep. I unreservedly recommend this staging of *Tosca* to those familiar with the work and those new to opera, alike.

Streaming Audio by Mark McClain

Solution, page 3

ACROSS

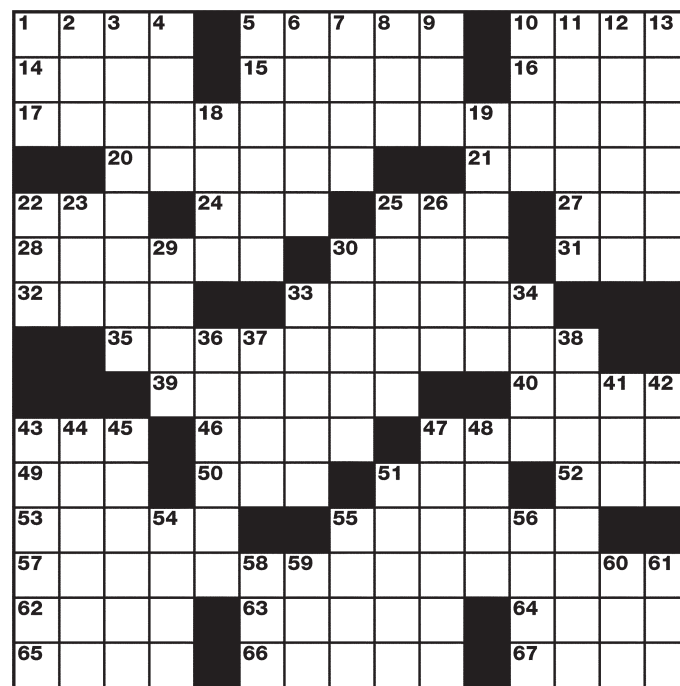
- 1 Family nickname
- 5 1981 Oscar winner as Loretta
- 10 Holds up
- 14 Colossal
- 15 Show regret
- 16 Crunchy cheesecake ingredient
- 17 Emma Bovary creator
- 20 Mall tenant, often
- 21 Stable sound
- 22 Disparaging remark
- 24 Profs' helpers
- 25 Links org.
- 27 DOJ arm
- 28 Whodunit elements
- 30 Hassle, for short
- 31 Little tree climber
- 32 Parisian prayer addressee
- 33 Fancy trimmings
- 35 Show Boat impresario
- 39 Word on the South American capitals list
- 40 Has a balance

43 Crock, for one
46 Capture by surprise
47 Not inert
49 Hosp. area
50 Facebook giggle
51 Swampy spot
52 Squelch
53 Sunlit lobbies
55 Rotten
57 Adapts easily
62 Olympics implement
63 Strike down, old-style
64 Evening in Pisa
65 Pitchfork prong
66 Distance runner
67 Poetic tributes

DOWN

- 1 Eldest of the "Little Women"
- 2 The Simpsons shopkeeper
- 3 Troublemaker's doings
- 4 Overture follower
- 5 File-menu command
- 6 News bits
- 7 Sectional, e.g.

8 NBC skit show
9 Assenting vote
10 Boxer's garb
11 Big potato processor
12 Norwegian port
13 With the result being
18 Social starter
19 Without the wherewithal
22 Terrible
23 Will Smith biopic role
25 Very fussy ones
26 Part of 25 Across
29 Eyedropper part
30 Hospital area
33 Ultimate
34 Problematic roommate
36 Western stock character
37 Not a one
38 Declined gradually
41 Manning in a huddle
42 Gender
43 Rolex alternative
44 Squid cousins
45 Serving piece
47 Nature personified

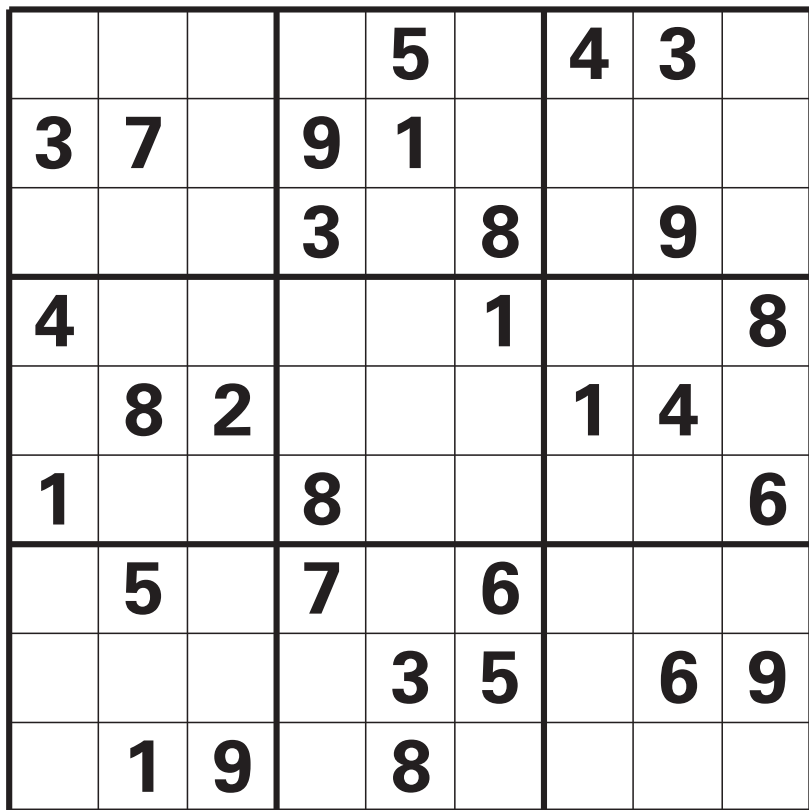


48 Fairy tale giant
51 Vertical-sided hill
54 "Got it!"
55 Punxsutawney groundhog
56 "In that case ..."

58 Doctrine
59 "We don't need to hear
60 that"
61 Underground resource
62 Took place

Specter

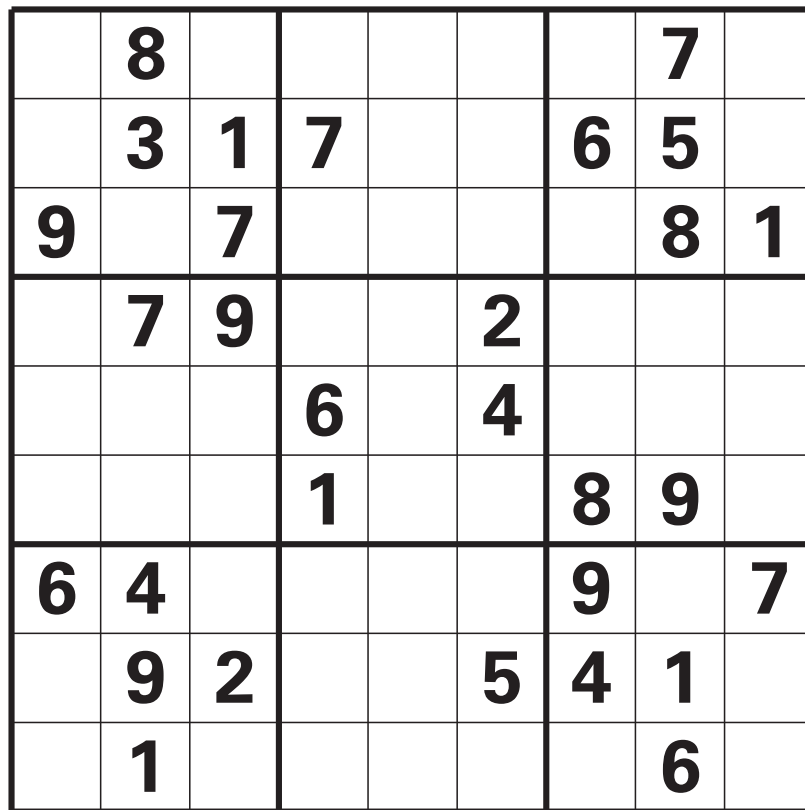
Solution, page 3



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Pumpkin

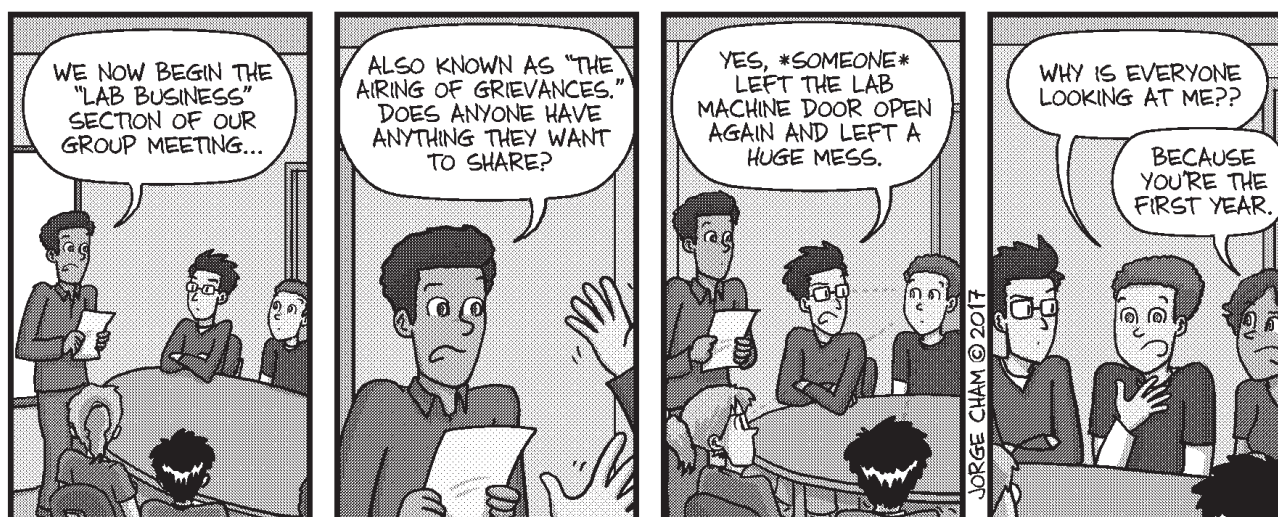
Solution, page 12



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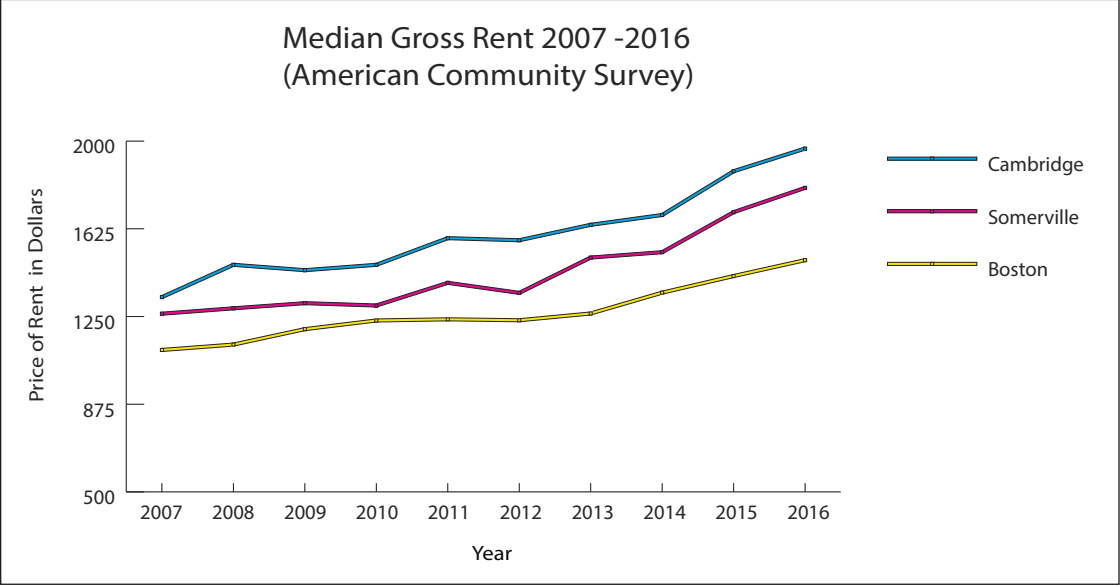


by Jorge Cham



WWW.PHDCOMICS.COM

Survey finds estimated demand for on-campus housing among grad students around 1,100 units



Median gross rent from 2007–2016 in the Boston area. Gross rent refers to the sum of rent and estimated utility bills. Data shows the most recent results of the American Community Survey from the U.S. Census Bureau.

Housing, from Page 1

group, according to Blynn. Volpe working group chair Steven Hall SB '80 SM '82 ScD '85 could not be reached for comment. However, MIT Office of Government and Community Relations co-director Sarah Gallop said in an interview with *The Tech*, "There were over 70 public community meetings to gather input about the Volpe site."

In July, the graduate students collaborated with the MIT Graduate Student Council to conduct a survey to gauge the potential demand for graduate student housing. The results showed there would be an unmet demand for 1,450 beds if there were no changes to the current housing system. The analysis also attempted to gauge the housing demand if larger changes about price, allocation lottery, keeping rooms, etc. were made. After sampling a combination of the most popular choices, the report found that such changes could create demand for 1,800 units.

Establishment of Graduate Student Housing Working Group

The GSC met with Chancellor Cynthia Barnhart PhD '88, Provost Martin Schmidt SM '83 PhD '88, and Treasurer Israel Ruiz SM '88 to discuss the lack of graduate housing in early August. "The zoning petition was a thought we had before our discussions with the administration, but we didn't have an exact solution," GSC President Sarah Goodman G said in an interview with *The Tech*.

Barnhart announced her plan to create the Graduate Student Housing Working Group to assess the graduate housing needs on Aug. 3. "The working group is bringing all the involved parties to the table.

Projects happen through partnership among students, administration, and faculty to help us realize the vision for more housing," Barnhart said in an interview with *The Tech*.

Ruiz noted some financial constraints of building new housing. "MIT is faced with competing demands for buildings to support priority academic uses and housing for both undergraduate and graduate students," Ruiz said in an email interview.

"It's a complicated issue and you need to gather as much data as possible," GSC Secretary Orpheus Chatzivasileiou G said in an interview with *The Tech*. "There's a lot of options on what to build, and things have also changed over the past three years since the Clay Report [a 2014 report done by a similar Graduate Student Housing Working Group that assessed housing needs], including the administration."

However, some graduate students still weren't satisfied with a working group. In 2014, the working group that published the Clay Report identified demand for 500-600 beds, but MIT is currently only building 250 net new beds in Kendall Square. Blynn said, "We felt like we had seen this history three years ago, and we were concerned that another working group alone wouldn't meet the housing needs of graduate students."

Barnhart elaborated on the process of building a new structure. "It's a complex challenge to go from idea and identification of need to having a design that is approved by the city and is ready to go," Barnhart said. "We have been doing campus planning to understand where we have opportunities to add beds."

MIT has already increased the percentage of graduate students housed on campus, from 27 percent in the 1980s and 1990s to almost 40 percent today, according to Barnhart.

MIT's Volpe zoning petition and GSAN's proposed amendment

The Volpe zoning petition is a mixed-use zoning petition with the city of Cambridge that MIT filed on Jun. 21 to build four commercial buildings, four residential buildings, and 2.5 acres of regional open space. In total, the space would be divided into 60 percent commercial retail space and 40 percent residential space, according to Gallop. By Cambridge law, 20 percent of the 1,400 residential units would have to be designated as affordable housing.

GSAN filed an amendment to the Volpe zoning petition on Aug. 14. It called for a total of 1,800 units, based on the results of a survey that the Graduate Student Council conducted in July. Specifically, it requested 1,100 housing units for single graduate students and 700 units for families to be built within 1.5 miles of the Volpe parcel in phases during the redevelopment.

The Cambridge City Council has to make a decision whether to adopt the GSAN zoning petition amendment before the Volpe petition expires on Oct. 31.

Ordinance Committee hearing on the petition amendment

MIT faculty, City Council candidates, Cambridge politicians, and local residents voiced their support for GSAN and attended the Ordinance Committee hearing for the zoning petition amendment.

Jonathan King, biology professor and MIT Faculty Newsletter editorial board member, said in an in-

terview with *The Tech*, "My research depends on graduate students, and they are the key to research at MIT. If they have to spend so much time commuting, it makes labwork very difficult."

"It's a win-win approach," Zondervan said in support of GSAN's petition in an interview with *The Tech*. "MIT provides affordable housing on campus for graduate students and there's more housing available for Cambridge residents."

At the hearing, Somerville resident Bill Cavallini detailed his personal experience in regards to the affordable housing crisis. "I had to leave Cambridge in 2004 after 30 years as a tenant organizer and affordable housing advocate. The primary reason was lack of affordable housing options after the loss of rent control in 1994. Before 1994, taxicab drivers like myself could barely afford to live in most neighborhoods in the city," Cavallini said at the hearing. "Afterwards, and to this day, you will find very few drivers living anywhere in Cambridge other than publicly subsidized housing."

The PowerPoint that GSAN presented at the hearing included a comparison to Stanford University's current work in spending \$1.1 billion to build 2,020 net new housing units, which would house 75 percent of their graduate students. Blynn said, "We knew MIT could make graduate housing a priority if it wanted to."

"There has to be an element of fairness. If MIT is bringing thousands of workers here as a result of Volpe, they have to work to balance these effects by providing more housing for graduate students," City Councillor Dennis Carlone said in an interview with *The Tech*.

City Councillor Leland Cheung MBA '10 was hesitant to delay the Volpe redevelopment at the expense of building more graduate housing. "I'm a little conflicted on how far we really want [MITIMCo] to do nothing with the Volpe site if they don't concede to the demands of more graduate housing," Cheung said at the hearing. "Am I willing to sacrifice all the good that's going to come out of redeveloping Volpe for the city?"

Others thought that the zoning petition amendment was the best way to get MIT to cooperate. Quinton Zondervan SM '95, City Council candidate, said at the hearing, "With the Volpe development, we have some leverage to get MIT to discuss the issue. If we approve the Volpe petition without addressing the graduate student housing petition, all that leverage is lost and we won't get MIT to agree to build affordable student housing we need."

Results of the Graduate Student Housing Working Group survey

The working group released an interim report on the results of a conjoint survey they conducted from Sept. 29 to Oct. 9. It estimated preference for 1,000-1,100 additional beds for students in on-campus housing and determined that graduate students valued price, unit type, and short commute time over building amenities and a sense of community.

The report first gave background about the current Cambridge rental market, MIT's growing graduate student population, and MIT's previous work in building graduate housing.

It also suggested that MIT develop a process to evaluate possible changes to housing policies, such as a review of the campus housing allocation process and assistance with the off-campus housing search.

The report recommended a detailed housing evaluation every three years.

"The working group is 100 percent open discussion, and we're making a lot of progress between the administration and graduate students in trying to really understand graduate housing and how we can improve it," Vice Chancellor and Graduate Student Housing Working Group Chair Ian Waitz said in an interview with *The Tech*.

Response to the working group report on graduate housing

Based on the interim report, the MIT administration sent an email to all graduate students on Oct. 16 promising to apply for permits to build a new residence hall with at least 500 beds and to "increase by 200 the number of permanent graduate beds by converting existing beds and/or establishing new beds on MIT's campus or properties owned by MIT" before the end of 2020.

However, GSAN responded in a statement on its website that the administration didn't completely fulfill the interim report's estimated demand of 1,000-1,100 beds. "Based on the interim report, the percentage of off-campus graduate students expressing a preference to live on-campus doubled between 2014 and today. This underscores the impact of rising rents on students, and suggests that the current shortfall is likely to grow in the years it will takes to bring more units online."

GSAN's statement also raised "questions about the specifics of how the administration will create the remaining 200 beds in its current proposal."

Gallop said, "The MIT administration and GSAN have the same objective, which is to look carefully at graduate student housing needs. There's just a difference in approach."

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Solution to Pumpkin
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5	8	6	9	1	3	2	7	4
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6	4	5	2	8	1	9	3	7
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8	1	3	4	7	9	5	6	2

Solution to Testing
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7	2	9	5	4	8	1	3	6
4	8	6	2	1	5	7	9	3
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